No. 658,009. Patented Sept. 18, 1900.

E. A. HAVENS.

TOOL FOR TURNING REGULAR FORMS.

(Application filed Nov. 13, 1899.)

(No Model.) 2 Sheets—Sheet 1.

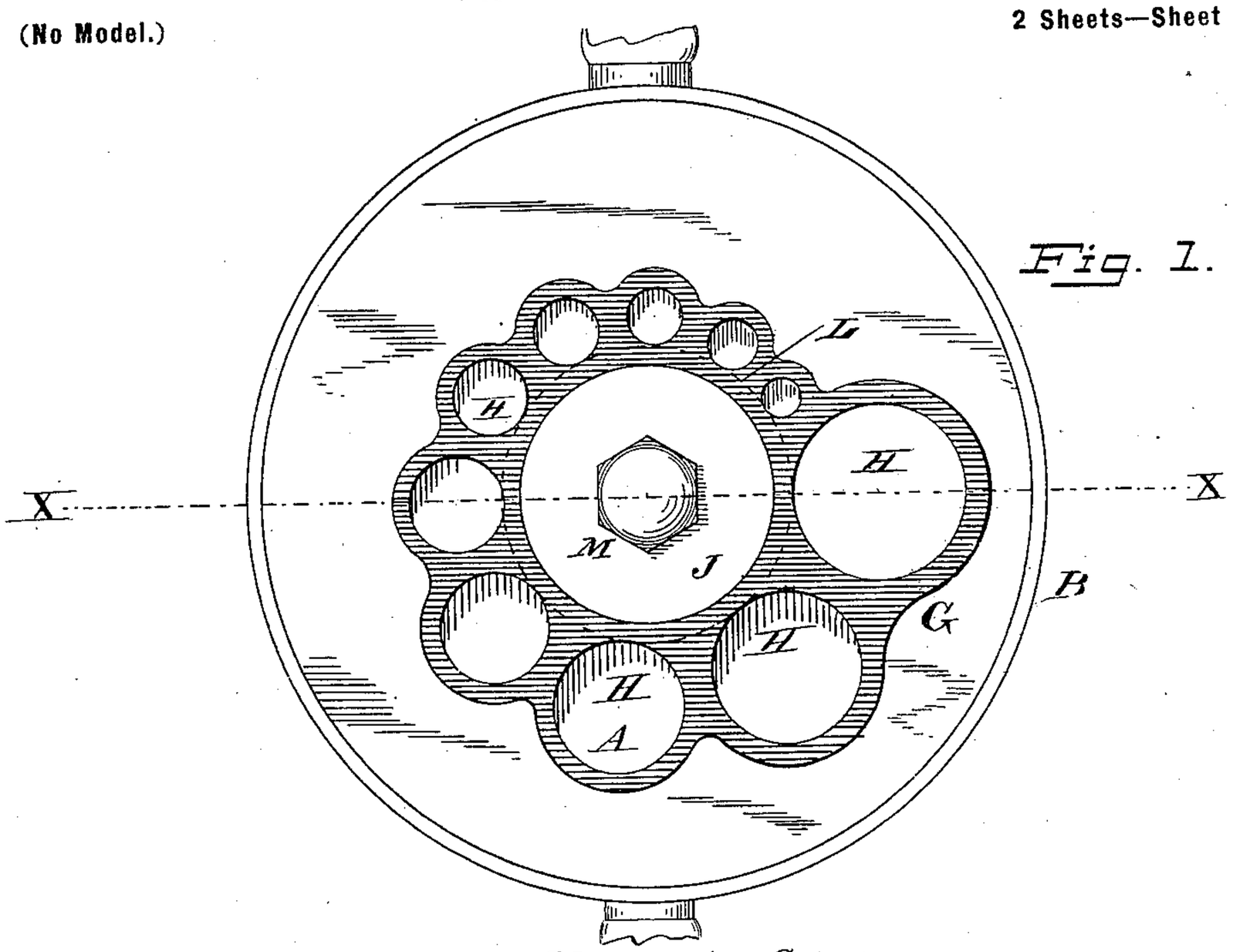


Fig. 1.

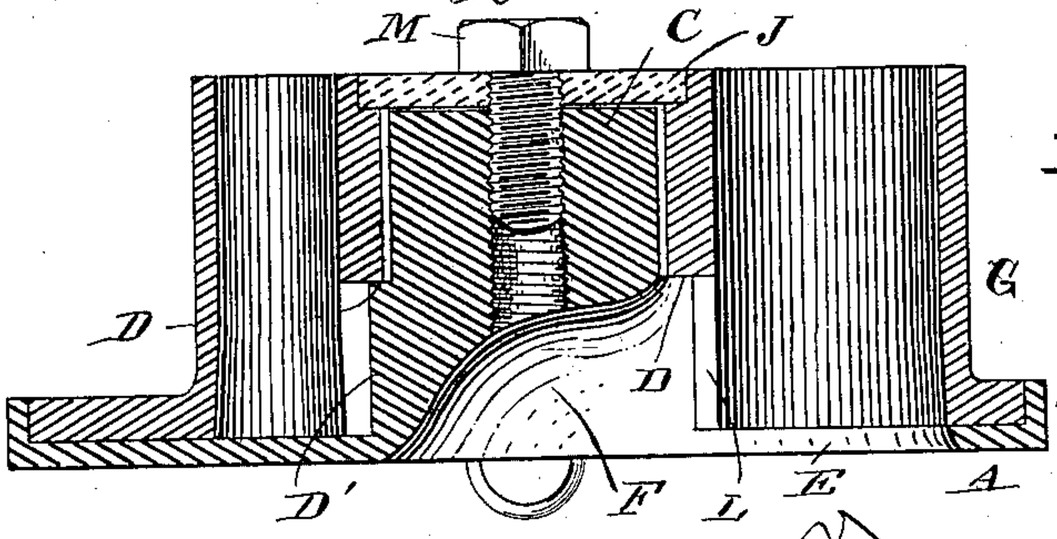


Fig. 2.

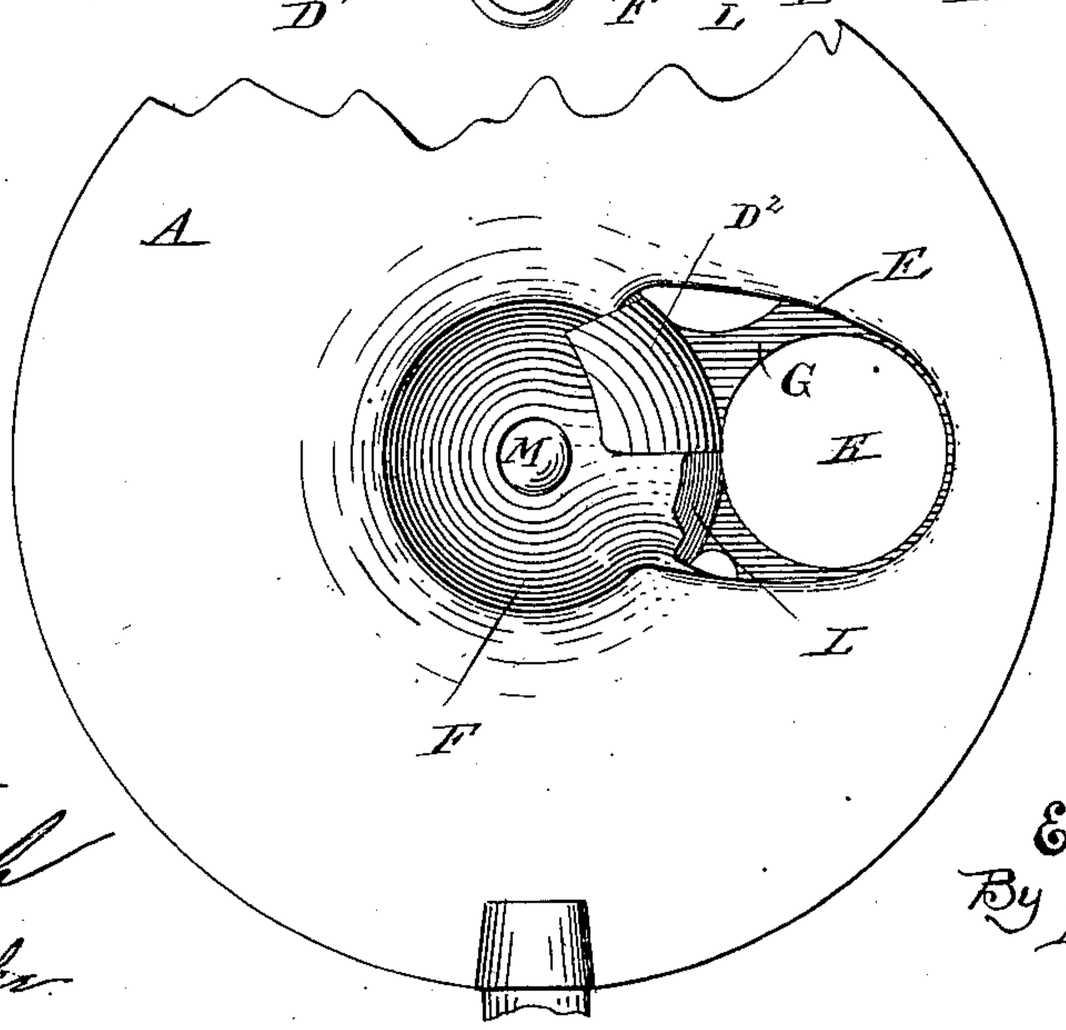


Fig. 3.

WITNESSES—

J. H. Blunck

N. E. Dukes

INVENTOR

Ernest A. Havens,

By L. M. Thurlow

Atty.

No. 658,009. Patented Sept. 18, 1900.

E. A. HAVENS.

TOOL FOR TURNING REGULAR FORMS.

(Application filed Nov. 13, 1899.)

(No Model.) 2 Sheets—Sheet 2.

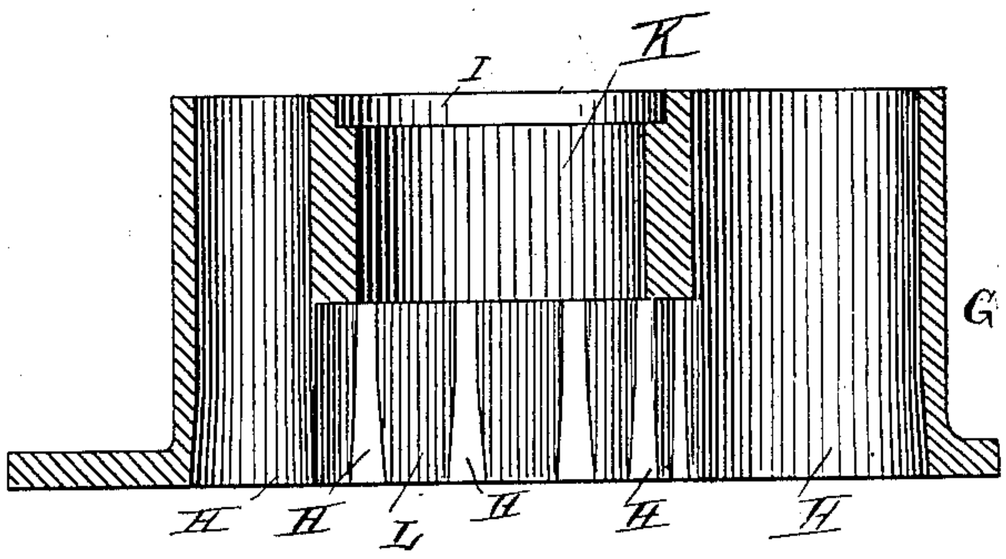


Fig. 4.

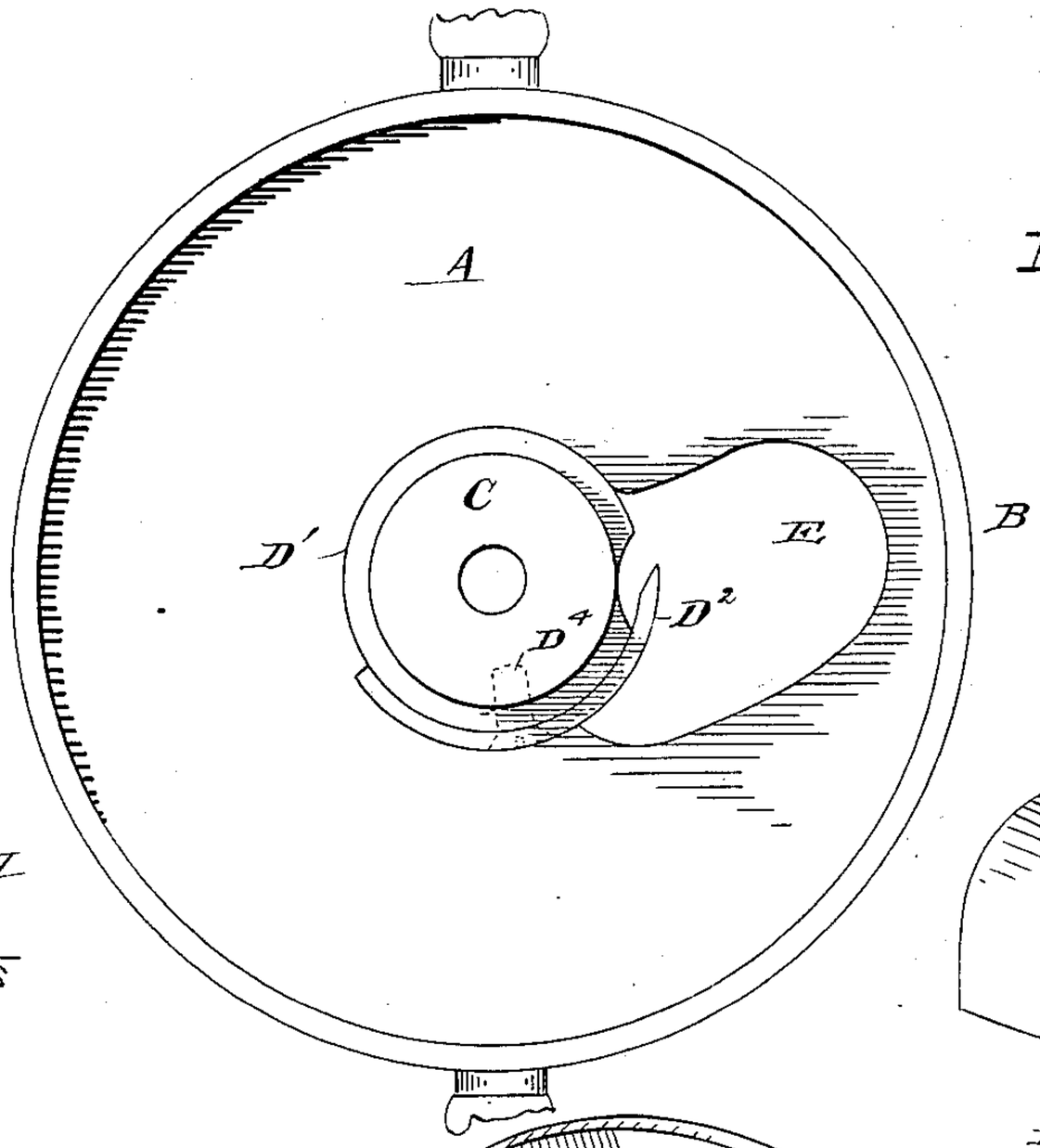


Fig. 5.

Fig. 6.

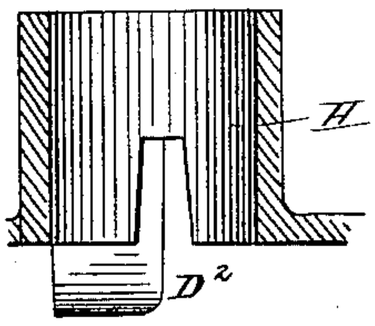
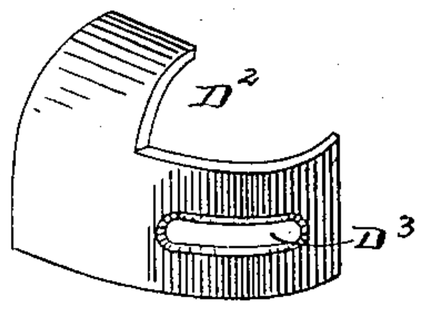


Fig. 9.



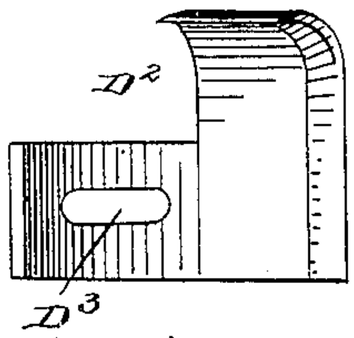


Fig. 10.

Fig. 7.

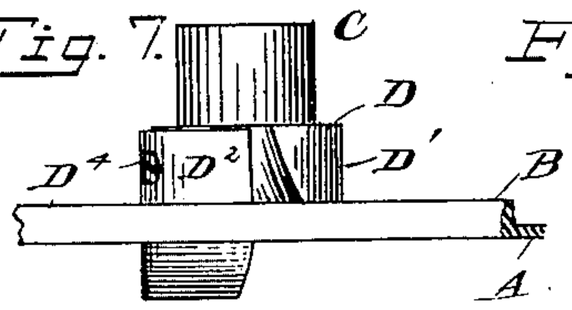


Fig. 8.

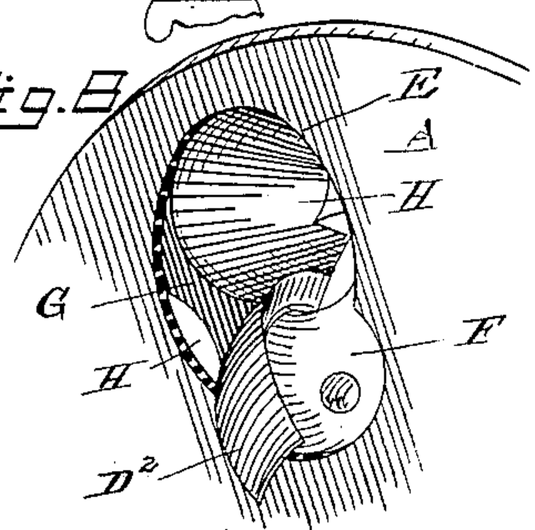
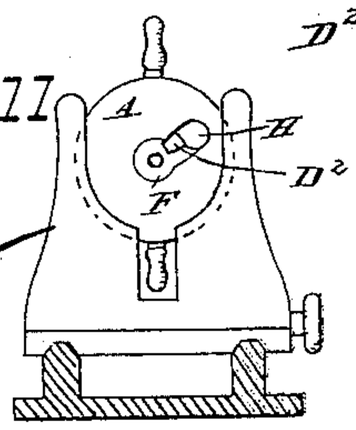


Fig. 11.



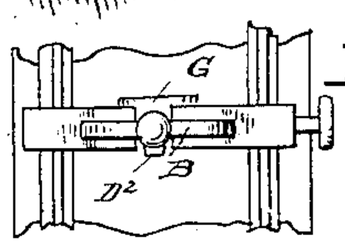


Fig. 12.

WITNESSES-
J. H. Blauchet
N. E. Dukes.

INVENTOR
Ernest A. Havens,
By L. M. Thurlow,
Atty.

UNITED STATES PATENT OFFICE.

ERNEST A. HAVENS, OF PEORIA, ILLINOIS.

TOOL FOR TURNING REGULAR FORMS.

SPECIFICATION forming part of Letters Patent No. 658,009, dated September 18, 1900.

Application filed November 13, 1899. Serial No. 736,790. (No model.)

To all whom it may concern:

Be it known that I, ERNEST A. HAVENS, a citizen of the United States, residing at Peoria, in the county of Peoria and State of Illinois, have invented certain new and useful Improvements in Tools for Turning Regular Forms; and I do hereby declare that the following is a full, clear, and exact description of the invention, which will enable others skilled in the art to which it appertains to make and use the same.

This invention pertains to a hand-tool for turning regular forms.

The object of such invention is to furnish an implement for quickly and perfectly turning rods of various lengths—such, for instance, as curtain-rods, towel-rollers, and the like—from wood or other like material. I am aware of nothing that will accomplish this purpose as quickly and as perfectly as the one that I am to describe, nor indeed am I aware of an implement that will perform this work at all. Heretofore it has been customary to form these rods in a lathe. This process is slow and unsatisfactory to say the least.

The advantages of my device will be readily understood by a study of the appended drawings, in which—

Figure 1 is a plan view of the back of my improved tool. Fig. 2 is a cross-section of the tool through line *x x*, Fig. 1. Fig. 3 is a view of the front face of the tool. Fig. 4 is a cross-section of a forming-block shown in Figs. 1 and 2. Fig. 5 is a plan view of the inside face of a covering-plate or base, showing a post made therewith for carrying a knife. Fig. 6 is a cross-section of a portion of the block shown in Fig. 4, indicating the position of a knife in connection therewith. Fig. 7 is an elevation of a portion of Fig. 5, showing the knife. Fig. 8 is a portion of the tool in perspective, showing the relative position of the parts. Fig. 9 is an exterior view of the knife. Fig. 10 is an inner view of the same. Fig. 11 is a view of a portion of a lathe and tool-holder having my invention mounted therein. Fig. 12 is a plan view of the same.

In the drawings letters of reference correspond with those of the specification.

A is a supporting-plate having an annular rim B at its outer edge and a central post or wrist C, having a shoulder at D, formed by the enlargement D′. In said plate and base is a recess E and F, respectively, for permitting the passage of the turnings therethrough. Upon the plate, within the annular rim B, is seated a block G of peculiar form, having a series of openings H of varying diameters perpendicular to the plane of the plate A. The inner adjacent peripheries of the openings are concentric with the circular form of the post C, and the centers thereof are consequently arranged in a spiral form. The purpose of this arrangement will appear presently. In the top of the block is a recess I for receiving a washer J, while the body of said block is bored out at K to receive the post C. To the latter the washer is secured by means of a suitable cap-screw M. At L the block is secured to permit the entrance of the shoulder D′ and the knife D^2, carried thereby. Said knife, as shown in Figs. 9 and 10, is slotted at D^3, and the screw D^4 enters the slot and the post C and secures the knife in place, said slot permitting adjustment of the latter in the direction of its length, which by reason of its form must be a movement about the post and concentric therewith. The bore L of the block G is of sufficient size to permit the entrance of the shoulder D′, as before stated, and permits the revolution of the same within it. Said bore, furthermore, intersects each of openings H, which appear as in Fig. 4. This is clearly shown in Figs. 3, 6, and 8. In Fig. 3 the edge of knife is shown just touching the periphery of the circle described by the said openings. The cap-screw M passes through the washer J into the post C at the top, as before stated, and binds the block G and plate A firmly together when set for use. The openings are flared at their bottoms, as shown in Figs. 2 and 4, whereby the edge of the knife protrudes within the opening and quickly removes the rough exterior of the work inserted, but gradually disappears until its inner end is just on the circle. The outer projecting end, which is curved, will first cut through the rougher portion of the wood and the inner end will give the finishing-cut. Any one of the openings may be brought around to the knife, and a rod of the

size corresponding to that opening will be formed.

In using the device a stick of wood of irregular form is chucked in a lathe or other similar machine and the device is placed against the free end thereof, whereby said stick is made to enter the opening beside the knife. By forcing the tool along the stick the latter will be quickly and smoothly formed. The apparatus may be clamped in a vise or similar tool and the stick may be inserted and held in a common carpenter's brace and driven thereby. In Figs. 11 and 12 I show my invention supported in a suitable carrier on the lathe, said carrier having suitable adjustment, whereby the opening for the stick being turned may be brought in line with the lathe-centers. This portion, however, I lay no claim to, but merely illustrate it to show an effective manner of performing the work.

As the knife becomes shortened by wear and grinding it may be quickly adjusted by the means provided.

Other means of fixing the block G to the plate A may of course be used. I have shown one method of accomplishing this purpose. The device may be otherwise altered without departing from the spirit of my invention, the aim and desire of which are to furnish a tool having a series of various-sized holes so arranged that any one of the said holes may be brought into position with reference to the knife for the purpose of turning a stick of regular form, the length of such stick being limited only by the lathe carrying it or the length of the wood itself.

Having thus described my invention, what I claim as new, and desire to secure by Letters Patent, is—

1. In a tool for turning regular forms of varying lengths, a revoluble block having a series of bores of varying size therein whose inner peripheries touch a circle struck from the center of such block, and a suitable base or support carrying a knife adapted to register with each of the said holes.

2. In a tool for turning regular forms, a suitable block having a series of various-sized openings therethrough, the centers of which are arranged in a spiral form, the inner peripheries touching a circle struck from the circle of said block, a base or support for the block to which the latter is secured, a knife secured to such base and having its cutting edge on the circle described from the center of the block, for the purposes set forth, said block being capable of rotary adjustment on said base for the purpose described.

3. In a tool for turning regular forms of various lengths, a block having a series of various-sized holes therethrough, arranged in a circle, said openings being flared at their lower ends, a base or support on the block having a flaring annular rim at its outer edge for receiving the said block, a central vertical post or wrist for the said base, a central recess in the block for receiving the said post, a washer resting on the block and a suitable screw passing through the washer into the post for locking the base and the block together, and a knife adjustably secured on the post and adapted to register with the openings as each is brought in line with it for the purpose described.

4. In a tool for turning regular forms, a block having a series of openings of varying diameter, a central bore intersecting each of the several openings, a base or support for the block, a central vertical post for such base, a knife adjustably attached to the post and adapted to extend within the said openings formed by the intersection of the central bore and the openings H, for the purposes set forth.

5. In a tool for turning regular forms, a base, or support having a vertical post thereon, a knife secured to the post, a recess through the base and the post, a block having a central bore adapted to receive the said post whereby such block may revolve thereon, means for locking the block and the base together, and a series of openings of varying diameters bored through the block parallel to said post and adapted one by one to register with the knife for the purposes herein set forth and described.

6. In a tool for turning regular forms, a block having a series of openings or bores therethrough arranged on a circle, each of said openings having a recess therein on that circle and a stationary knife adapted to enter each of the holes by a revolution of the said block, all for purposes set forth.

7. In a tool for turning regular forms, a revoluble block mounted on a base or support, a series of holes of varying size in the block, a central bore therethrough for receiving a post on the said base and upon which it revolves, a second larger bore adapted to intersect the said holes whereby apertures are formed in each of the openings H toward the pivot of the block and a knife secured to the said base, or support and adapted to enter each of the apertures whereby the work when entered in the openings containing the knife will be rounded, when revolved against the knife, or the knife revolved against the work as set forth.

8. In a tool for turning regular forms, a block having a series of holes therein, a central bore intersecting each of the holes and a knife located within the bore and adapted to have each of the said series of bores revolve past it, whereby any one thereof may be set opposite such knife for the purposes set forth.

9. In a tool for turning regular forms, a block G having bores or openings H flared at their lower ends, the base A having the central post C, a knife D^2 secured to the latter, counterbores K and L, the former for receiving said post C, the latter intersecting and opening into the bores H and adapted to permit the revolution of said block about the

knife for the purposes set forth and means for rigidly securing the base and block together.

10. In a tool for turning regular forms, a block having a series of openings therethrough, a counterbore arranged to intersect and open into said openings, and a knife located within the block to enter any one of the said bores, for the purposes herein set forth and described.

11. In a tool for turning regular forms, a revoluble block having a series of bores parallel with the axis of said block, said bores arranged in a circle with their peripheries equidistant from the said axis of the block and a knife located within the circle described by the revolution of the bores, said knife adapted to intersect the periphery of each bore as set forth.

In testimony whereof I affix my signature in presence of two witnesses.

ERNEST A. HAVENS.

Witnesses:
C. JOHNSON,
A. KEITHLEY.